

No. : 09/292,437
Date : April 15, 1999

wherein the conservative amino acid substitutions are any of the following: (1) any of isoleucine, leucine, and valine for any other of these amino acids; (2) aspartic acid for glutamic acid and vice versa; (3) glutamine for asparagine and vice versa; and (4) serine for threonine and vice versa.

Please amend claim 9 to read as follows:

9. (Amended) An isolated nucleic acid molecule according to claim 8 wherein the amino acid sequence of said enzyme is: M-K-K-W-T-N-R-L-M-T-I-A-G-V-V-L-I-L-V-A-A-Y-L-F-A-K-P-H-I-D-N-Y-L-H-D-K-D-K-D-E-K-I-E-Q-Y-D-K-N-V-K-E-Q-A-S-K-D-K-K-Q-Q-A-K-P-Q-I-P-K-D-K-S-K-V-A-G-Y-I-E-I-P-D-A-D-I-K-E-P-V-Y-G-P-A-T-P-E-Q-L-N-R-G-V-S-F-A-E-E-N-E-S-L-D-D-Q-N-I-S-I-A-G-H-T-F-I-D-R-F-N-Y-Q-F-T-N-L-K-A-A-K-K-G-S-M-V-Y-F-K-V-G-N-E-T-R-K-Y-K-M-T-S-I-R-D-V-K-P-T-D-V-G-V-L-D-E-Q-K-G-K-D-K-Q-L-T-L-I-T-C-D-D-Y-N-E-K-T-G-V-W-E-K-R-K-I-F-V-A-T-E-V-K (SEQ ID NO: 3).

Please amend claim 10 to read as follows:

10. (Amended) An isolated nucleic acid molecule encoding a sortase-transamidase enzyme from a Gram-positive bacterium, comprising a sequence selected from the group consisting of: (1) ATGAAAAAATGGACAAATCGATTAATGACAATCGCTGGTGTGGTA CTTATCCTAGTGGCAGCATATTTGTTTGCTAAACCACATATCGATAATTATCTTCACG ATAAAGATAAAGATGAAAAGATTGAACAATATGATAAAAATGTAAAAGAACAGGC GAGTAAAGATAAAAAAGCAGCAAGCTAAACCTCAAATTCCGAAAGATAAATCGAAAG TGGCAGGCTATATTGAAATTCCAGATGCTGATATTAAAGAACCAGTATATCCAGGAC CAGCAACACCTGAACAATTAATAGAGGTGTAAGCTTTGCAGAAGAAAATGAATCA CTAGATGATCAAAAATATTTCAAATGTCAGGACACACTTTTCATTGACCGTCCGAACAT CAATTTACAAATCTTAAAGCAGCCAAAAAAGGTAGTATGGTGTACTTTAAAGTTGGT AATGAAACACGTAAGTATAAAAATGACAAGTATAAGAGATGTTAAGCCTACAGATGT AGGAGTTCTAGATGAACAAAAAGGTAAAGATAAACAAATTAACATTAATTACTTGTG ATGATTACAATGAAAAGACAGGCGTTTGGGAAAAACGTAAAATCTTTGTAGCTACA GAAGTCAAATAA (SEQ ID NO: 2); or (2) a sequence complementary to SEQ ID NO: 2.